

Abstract

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[Problem] In a conventional rotating electrical machine to perform starting and power generation, an inverter and a rotating electrical machine body are constructed to be separate bodies, and a three-phase harness is provided between the rotating electrical machine and the inverter, and by a voltage drop or loss in this portion, there have been limitations in the improvement of starting and power generation output, and efficiency at the time of same operating current (determined by thermal limitation of the inverter).

[Means for Resolution] Since an inverter unit 22 is integrally attached to a rear bracket 44 and is integrally mounted on the end face of a rotating electrical machine 20 in an axial direction, harnesses to be connected can be made short, and reduction in weight of the harness and improvement in resistance to outer disturbance noise can be realized. Besides, as a rotor 40, since a claw-pole type rotor is constructed in which permanent magnets 40c and 40d are added, inverter base current is reduced, so that the size of the inverter unit 22 can be miniaturized, and it can be integrally mounted to the starting and power generation electrical machine.

[Selected Drawing] Fig. 1